



1600 South Second Street
Mount Vernon, WA 98273-5202
ph 360.428.1617
fax 360.428.1620
www.nwcleanair.org

Air Operating Permit Excess Emissions Report Form Part II

Name of Facility	Shell, Puget Sound Refinery	Reported by	Tim Figgie
Date of notification	June 13, 2012	Incident type: breakdown/ upset/startup or shutdown	Malfunction
Start Date	June 13, 2012	Start Time:	11 AM
End Date	June 13, 2012	End Time:	12 noon
Process unit or system(s): FCCU Wet Gas Scrubber			

Incident Description

On June 13 at approximately 10:50 am the CO boiler 1 tripped while preventative maintenance was being performed on safety shutdown instrumentation. During the instrumentation checks the safety system is required to be bypassed. Operations inadvertently bypassed only one part of the system, resulting in a CO boiler trip when the instrumentation was checked. This resulted in high CO in the wet gas scrubber stack. To reduce CO emissions the FCCU charge rate was decreased and the fuel gas flow to the CO boiler 1 was shut off until Operations could safely begin restart procedures of the boiler.

One, 1-hour average CO reading above the 500ppm corrected to 7% excess air limit occurred. To prevent a reoccurrence of this event Operations personnel will be instructed on following proper safety system isolation procedures.

Immediate steps taken to limit the duration and/or quantity of excess emissions:

The FCCU regenerator feed rate was reduced to reduce CO concentration to the boilers and the CO boiler 1 was restarted as soon as practicable.

Applicable air operating permit term(s): 5.3.16

Estimated Excess Emissions: Based on CEMS and calculated stack flow	Pollutant(s): CO	Pounds (Estimate): 162
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The incident was the result of the following (check all that apply):

- ☐ Scheduled equipment startup
- ☐ Scheduled equipment shutdown
- ☐ Poor or inadequate design
- ☐ Careless, poor, or inadequate operation
- ☐ Poor or inadequate maintenance
- ☒ A reasonably preventable condition

Did the facility receive any complaints from the public?

- ☒ No
- ☐ Yes (provide details below)

Did the incident result in the violation of an ambient air quality standard

- ☒ No
- ☐ Yes (provide details below)

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Root and other contributing causes of incident:

Safety system testing and incorrect isolation of instrumentation within that system.

The root cause of the incident was:

(The retention of records of all required monitoring data and support information shall be kept for a period of five years from the date of the report as per the WAC regulation (173-401-615))

☒ Identified for the first time

☐ Identified as a recurrence (explain previous incident(s) below – provide dates)

Are the emissions from the incident exempted by the NSPS or NESHAP "malfunction" definitions below?

☒ No

☐ Yes (describe below)

Definition of NSPS "Malfunction": Any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or failure of a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. 40 CFR 60.2

Definition of NESHAP "Malfunction": Any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. 40 CFR 63.2

Analyses of measures available to reduce likelihood of recurrence (evaluate possible design, operational, and maintenance changes; discuss alternatives, probable effectiveness, and cost; determine if an outside consultant should be retained to assist with analyses):

Operations personnel have been informed of the importance of following isolation procedures.

Description of corrective action to be taken (include commencement and completion dates):

See above

If correction not required, explain basis for conclusion:

See above

Attach Reports, Reference Documents, and Other Backup Material as Necessary. This report satisfies the requirements of both NWCAA regulation 340, 341, 342 and the WAC regulation (173-400-107).

Is the investigation continuing?

☒ No ☐ Yes

Is the source requesting additional time for completion of the report? ☒ No ☐ Yes

Based upon information and belief formed after reasonable inquiry, I certify that the statements and information in this document and all referenced documents and attachments are true, accurate and complete.

Prepared By: Don Kelly Date: June 13, 2012

Responsible Official or Designee: Thomas J. R. [Signature]

Date: 6/17/12